

REMARKS/ARGUMENTS

Claims 1-21 were previously pending in the application. The Applicants acknowledge the withdrawal of Claims 18-21 under 37 C. F. R. 1.142(b). Accordingly, Claims 1-17 remain in the application. All claims stand rejected on various grounds.

Claim 1 has been amended and Claim 5 is cancelled without prejudice. Moreover, new Claim 22 has been added. Accordingly, Claims 1-4, 6-17, and 22 are now pending in this application. No new matter has been added. Reconsideration and allowance are respectfully requested.

Information Disclosure Statement:

The reference listed on page 20 of the Specification "Dual Damascene: Overcoming process issues," Semiconductor International (June, 2000) will be provided in an IDS to be filed in the immediate future. The applicants point out that the aforementioned document is believed to be in the nature of background material.

Objections to the Drawings:

Applicants acknowledge that the submitted drawings are informal. Formal drawings are being prepared at this time and will be submitted at the time of issuance. If the Examiner wishes an earlier submission of the drawings the applicants will comply upon notification by the Examiner.

Claim Rejections Under 35 U.S.C. §102:

Claims 1-4, 7-10, and 12-17 stand rejected under 35 U.S.C. §102(a) as being anticipated by the U.S. Patent to *Xi, et al.* (US 2002/0060363) (hereinafter *Xi*).

Claim 1 has been significantly amended to incorporate the salient limitations of Claim 5 (in fact Claim 1 has been reconfigured as unamended Claim 5). Since Claim 5 has already been deemed allowable, the applicants respectfully submit that the aforementioned amendment places Claim 1 in condition for allowance. Accordingly, since the cited art does not teach all of the claim limitations recited in Claim 1, it is respectfully requested that the rejection of Claim 1 be withdrawn.

Additionally, Claim 5 is cancelled without prejudice. Moreover, all remaining claims (Claims 1-4, 6-17, and new Claim 22) depend (either directly or indirectly) from Claim 1 which is believed to be allowable for at least the reasons expressed above with respect to Claim 1.

Accordingly, the applicants respectfully request that all pending rejections of Claims 1-4 and 6-17 be withdrawn.

Claim Rejections Under 35 U.S.C. §103:

Claim 11 stands rejected under 35 U.S.C. §103(a) as being anticipated by the U.S. Patent to *Xi* in view of *Wu et al* (US 2004/0130035) (hereinafter *Wu*). As explained above, the amendment to Claim 1 obviates the rejection based on *Xi*. The claimed invention now requires that the "barrier metal film formed on the sides of the trench [be] approximately 20 per cent or less of the thickness of the barrier metal film formed at the bottom of the trench". No such limitation is found in either *Xi* or *Wu*. Thus, the cited art, alone or in any reasonable combination, does not teach all of the claim limitations recited in Claim 11. Accordingly, the cited art fails to establish a *prima facie* case of obviousness with respect to Claim 11. Therefore, it is respectfully requested that this ground for rejecting Claim 11 be withdrawn.

Allowable Subject Matter:

Claims 5 and 6 have been deemed allowable as being directed to patentable subject matter. Claim 5 has been incorporated into Claim and now forms the base claims for all pending dependent claims (including allowable dependent claim 6). Accordingly, Claim 5 was cancelled. However, due to the amendment the applicants assert all pending claims are allowable.

New Claim 22:

New Claim 22 depends from Claim 1 and should, for at least the reasons expressed above with respect to Claim 1 (and Claim 5), be allowable. An added limitation of directional deposition "performed using one of ionized metal plasma (IMP), high power self-ionized plasma (SIP), and ionized physical vapor deposition (IPVD) methods" is also recited to further support a case for allowability.

CONCLUSION

Applicants respectfully submit that based on the amendments and remarks made herein that all pending claims (Claims 1-4, 6-17, and 22) are in condition for allowance and therefore respectfully request a Notice of Allowance for this application from the Examiner. The Examiner is cordially invited to contact the applicants' attorney to discuss any matters

concerning this case. If the Examiner wishes to contact the applicants' attorney by telephone, he can be contacted at the telephone number set forth below.

Respectfully submitted,

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